

ATTACHMENT C**Water and Wastewater Impact Fee Study
Description of Capital Improvement Facilities****Associated Water****WATER SUPPLY AND TREATMENT SYSTEM**

ADVANCED WATER PURIFICATION FACILITY – The efforts by EPWater to continue to diversify the City’s water supply portfolio will allow growth demand in the eastside and northeast to be met by the Advanced Water Purification Facility producing 8.0 MGD. This facility will recycle water that was used for irrigation into drinking water.

KBH EXPANSION Phase 1–In order to meet growth demand in the eastside and northeast, the KBH desalination facility will be expanded to provide an additional 5.0 MGD to its service area. The expansion includes a new Reverse Osmosis skid, source wells and concentrate injection wells.

RESERVOIRS

LOMA REAL TANK This project consists of constructing a 5.0 MG ground storage tank to meet demand on the East High Pressure Zone and provide suction for the Loma Real Pump Station that will pump water to the proposed Franklin East 1 B reservoir.

FRANKLIN EAST #1B - A 3.0 MG Reservoir and a 3.0 MG future reservoir to serve the Franklin East 1 Pressure Zone. The Reservoir is needed to meet future growth development of the lower reaches of the areas east of War Highway and to the State line.

TRANSMOUNTAIN NORTHWEST #1A – A 4.0 MG tank north of Transmountain on the Westside, at the same overflow elevation of Arcraft No. 1, to meet anticipated growth and provide suction storage for the proposed Transmountain Northwest 1 pump station.

TRANSMOUNTAIN NORTHWEST #2A – A proposed 3.0 MG tank north of Transmountain on the Westside, at the same overflow elevation of Arcraft No. 2, to meet anticipated growth.

EASTSIDE PLANNED SERVICE AREA (PSA) - New reservoir to serve areas east of Loop 375. Tierra Del Este (Ranchos Real) 3.0 MG elevated tank.

ARTCRAFT NO. 4 RESERVOIR – A 2.0 MG ground storage tank located on the west foothills of the Franklin Mountains to serve future development in the upper service areas east of IH-10 near Transmountain Road.

ATTACHMENT C**Water and Wastewater Impact Fee Study****Description of Capital Improvement Facilities**

NORTHEAST STATION WELL SUPPLY TANK (I.F.) – A new 2.0 MG ground storage supply tank in Northeast El Paso, at the intersection of Sean Haggerty Drive and McCombs Blvd., adjacent to the Northeast Booster Station. This tank is needed to augment the existing storage capacity of the Northeast Well production system, and to accommodate future supply from the Sherman Well Field. This storage tank will also allow for additional pumping capacity to be installed at the Northeast Booster Station for pumping into the East High Pressure Zone and upper Franklin East Pressure Zone pumping, related future growth.

MONTANA EAST – A series of storage facilities have been conceptually planned to provide service on the Eastside north and south of the Montana Ave. corridor, extending about 8 miles east of Loop 375. EPWater's long-range plan projects a multi-year, multiphase approach to extend pipelines, construct elevated storage tanks (3 totaling 6.5 MG –and one pump station (15.0 MGD Phase I plus additional 10.0 MGD Phase 2) to supply these areas. This item includes two storage tanks, Vista Del Este (2.5 MG), and Homestead II (2.0 MG).

DISTRIBUTION PUMPING EQUIPMENT

ARTCRAFT #1 – A 20.0 MGD pumping station located at Northwestern and Paseo Del Norte (Arctcraft Rd) in Northwest El Paso, was completed in late 2002 and will supply Arctcraft #2 Reservoir. An additional 5.0 MGD will be added under this project to meet future demands.

NORTH 2 PUMP STATION – Initial 11.8 MGD to future 22.3 MGD pump station at the North 2 Tank site to meet future summer peak-day demands in the Franklin East Pressure Zones #1

TRANSMOUNTAIN NORTHWEST #1 PUMP STATION - Proposed pump station north of Transmountain on the Westside, to pump from Transmountain #1 Reservoir to Transmountain #2 Reservoir to meet growth.

ARTCRAFT #3 PUMP STATION – A 3.0 MGD pumping station in Northwest El Paso will supply Arctcraft #4 reservoir.

LOMA REAL Pump station with an initial 3.0 MGD capacity which will provide pumping to supply the Franklin East 1 B reservoir.

MONTANA EAST (3.0 MGD – Ranchos Real) - Pump Stations have been conceptually planned to provide service to the Eastside for development along north and south of the Montana Ave. corridor, extending about 8-miles east of Loop 375. EPWater's long-range plan projects a multi-year three- phase approach to extend pipelines, construct elevated storage tanks, and booster stations.

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ATTACHMENT C**Water and Wastewater Impact Fee Study****Description of Capital Improvement Facilities****DISTRIBUTION LINES**

CANUTILLO/UV TRANSMISSION MAIN - NORTHWEST PHASE IV – Part of an existing major system of large diameter pipelines that extends and delivers water supply from the Canutillo Well Field and This item consists of Phase IV will consist of a 36-inch line extending from the Phase I – 48-inch line from Graphite & Mace to the Fred Miller Storage site.

TRANSMOUNTAIN NW SUPPLY TO TRANSMOUNTAIN #1 - A proposed transmission main on the Westside, from the Canutillo Main to the Transmountain Reservoir #1 to meet growth.

TRANSMOUNTAIN NW SUPPLY TO TRANSMOUNTAIN #2 - A proposed transmission main on the Westside, from the Transmountain Pumping Station #1 to the Transmountain Reservoir #2 to meet growth.

BORDERLAND 16-inch/24-inch DONIPHAN, STRAHAN, LA UNION – Part of the Northwest System upgrades to meet future growth on the west side. The project consists of the installation of a 36-inch transmission main. Also, there is an extension of a 16-inch or larger line from Galindo/Doniphan Dr., west along Borderland to Strahan Road.

EASTSIDE PLANNED SERVICE AREA (PSA) – Proposed transmission main lines necessary to serve areas east of Loop 375. Extensions of transmission mains associated with the construction of future new elevated tanks. This item provides the backbone for the water distribution to meet demand.

NORTHWEST DISTRIBUTION MAINS – Proposed transmission mains necessary to serve areas generally located north and south of Transmountain Road, east of IH-10, including the portions of the Northwest Regulating Plan within the Coronado Country Club 2 pressure zone.

ARTCRAFT #3 BOOSTER STATION TO ARTCRAFT #4 RESERVOIR - 24-inch pipe to connect the booster station to the reservoir.

MONTANA EAST SUPPLY LINES– Distribution facilities have been conceptually planned to provide service on the Eastside along north and south of the Montana Ave. corridor, extending about 8 miles east of Loop 375. EPWater’s long-range plan projects a multi-year three-phase approach to extend pipelines, construct elevated storage tanks and a major pump station. This item considers the design and future construction of a backbone network of water transmission mains (16-inch to 24-inch) to supply these areas.

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MONTANA EAST 36-inch LINE – A proposed transmission main from the Ranchos Real Reservoir to the Montana East Reservoirs.

DYER / RR WATER LINE – A series of planned water mains to convey water to the far northeast part of the city. The proposed pipeline will tie into the NE Franklin Distribution Line near the intersection of Stan Roberts Dr. and US-54, and then will extend east along Stan Roberts to Dyer and then south along Dyer.

NE FRANKLIN DISTRIBUTION LINE – A network of water distribution mains, generally 16-inch to 24-inch, to be constructed within the Franklin East #1 Pressure Zones service areas (NE Master Planned areas) in response to and in step with emerging developments.

FRANKLIN EAST 1 DISTRIBUTION LINE – Water distribution main parallel to US-54 from the Franklin East 1 A tank to Stan Roberts Dr.

ATTACHMENT C**Water and Wastewater Impact Fee Study****Description of Capital Improvement Facilities****Associated Wastewater****COLLECTION LINES**

NE DYER/RR INTERCEPTOR - Series of gravity sewer lines extending from the New Mexico-Texas boundary near Stan Roberts Dr. and Dyer St. that convey wastewater flows to the Fred Hervey Reclamation Plant. This system will service future development in the Northeast including the existing Futureland Subdivision.

OTHER EAST INTERCEPTORS (Area 8 East) – Sewer trunk collectors related to development east of Zaragoza and Loop 375 for the area commonly known as Montana Vista and adjacent annexed areas requests for service by developers. Includes oversized collectors in which the EPWater participates.

LOOP 375 EAST INTERCEPTOR SYSTEM - These multi-phase, multi-year interceptors will serve the ETJ areas east of Loop 375, including GLO and proposed MUDS. A master plan study for this area was completed in 1997. It includes relieving Saul Kleinfield Interceptors and Playa Drain (Mesa Drain and Valley) Interceptors. All interceptors in this program will ultimately transport flow to the Roberto R. Bustamante Wastewater Treatment Plant via the Eastside Interceptor System already constructed.

TRANSMOUNTAIN NORTHWEST INTERCEPTORS – Proposed sewer interceptors necessary to serve areas north of Transmountain Road and east of IH-10 on the Westside to meet growth. Future projects scheduled for construction may depend on development progress.

NE INTERCEPTOR SYSTEM – Sanitary sewer pipelines designed to collect and convey wastewater flows from the Sandstone Ranch Subdivision and a portion of land in the Northeast area. The sanitary sewer pipeline will extend along the future Sean Haggerty Blvd (north of US-54), and south crossing the US-54 along the existing Sean Haggerty Blvd, to the existing Grouse Street Lift Station or to the future Northeast Lift Station, where the wastewater will ultimately be treated at the Fred Hervey Water Reclamation Plant. This is a multi-year, multi-phase project.

NE FRANKLIN SERVICE AREA –Pipeline designed to collect and convey wastewater flows from the proposed Northeast Service Area. Flows will be collected from near the Texas-New Mexico border, south crossing US-54 to be delivered to the existing Grouse Street Lift Station, where the wastewater will ultimately be treated at the Fred Hervey Water Reclamation Plant. This is a multi-year, multi-phase project.

PASEO DEL NORTE EXTENSION - Proposed sanitary sewer mains lines necessary to serve areas generally located south of Transmountain Rd., east of IH10. This item will collect the flows for portions of the Northwest Regulating Plan.

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LA MESA LINE – Proposed sewer main along La Mesa Ave., east of IH-10 to convey flows from the properties east of IH-10 to the Mowad Interceptor System.

STRAHAN INTERCEPTOR - Proposed sewer main along Strahan Rd. to provide service to developments on the Upper Valley.

PUMPING STATIONS AND FORCE MAINS

TRANSMOUNTAIN NORTH LIFT STATION & FORCE MAIN – This proposed station to be constructed on the east side of IH-10 north of Transmountain Rd. in Northwest El Paso to provide service to future Transmountain North developments to meet growth.

NE DYER/RAILROAD LIFT STATION – Project consists of an initial phase to upgrade the existing 0.5 MGD Futureland Lift Station to 1.3 MGD service capacity. As part of the utility's ultimate facility wastewater plan for in-fill development areas in the vicinity of the Dyer St. to Railroad Drive Corridor between McCombs St. and the State Line, a 5 MGD expandable to a future 11.0 MGD wastewater lift station is proposed which will convey wastewater generated from this area to the Fred Hervey Water Reclamation Plant.

UPPER VALLEY THREE LIFT STATIONS – A series of lift stations (1.5, 2.5, 3.5 MGD) proposed for new developments north of Borderland Rd. along the Strahan Rd. corridor. These stations will ultimately discharge into the Strahan Interceptor that will extend and connect into the Easy Way II Lift Station.

TREATMENT PLANT EXPANSION

BUSTAMANTE WWTP EXPANSION – Multi-approach construction project to expand the loading and flow capacity of the Roberto Bustamante WWTP from 39.0 MGD to 54.0 MGD.



Attachment D
Water and Wastewater Impact Fee

Proposed Capital Improvement and Cost

Northeast Service Area		Capital Cost
Wastewater		
<u>Wastewater Treatment</u>		
None		\$0
	Subtotal	\$0
<u>Collection Systems</u>		
<u>Lines</u>		
NE Dyer/RR Interceptor		\$10,920,000
NE Interceptor System (EPW-NEMP)		\$11,400,000
NE Franklin Service Area		\$8,800,000
	Subtotal	\$31,120,000
<u>Pumping & Force Mains</u>		
NE Dyer/RR Lift Station - 5MGD		\$6,000,000
	Subtotal	\$6,000,000
Northeast Total Wastewater CIP		\$37,120,000
Water		
<u>Water Supply & Treatment System</u>		
KBH Phase 1		\$9,700,000
Advanced Water Purification Facility		\$9,680,000
	Subtotal	\$19,380,000
<u>Water Distribution System</u>		
<u>Reservoirs</u>		
Loma Real Tank - Ground (5 MG)		\$7,500,000
Franklin East 1B (3 MG) - Ground		\$3,000,000
NE Station Well Supply Tank (2)		\$6,650,000
	Subtotal	\$17,150,000
<u>Distribution Pumping Equipment</u>		
North Two Pump Station (11.8 MGD)		\$4,320,000
Loma Real Pump Station (initial 3MGD)		\$1,235,000
	Subtotal	\$5,555,000
<u>Distribution Lines</u>		
Dyer/RR Waterline		\$4,500,000
NE Franklin Distribution Line		\$26,700,000
Franklin East 1 Distribution		\$2,035,000
	Subtotal	\$33,235,000
Northeast Total Water CIP		\$75,320,000



Attachment D (continued)

Water and Wastewater Impact Fee

Proposed Capital Improvement and Cost

Eastside Service Area	Capital Cost
Wastewater	
<u>Wastewater Treatment</u>	
Bustamante WWTP Expansion 39 to 54 MGD	\$64,000,000
Subtotal	\$64,000,000
<u>Collection Systems</u>	
<u>Lines</u>	
Other Interceptors (Area 8 East)	\$14,000,000
Loop 375 East Interceptor System	\$17,150,000
Subtotal	\$31,150,000
<u>Pumping & Force Mains</u>	
	\$0
Subtotal	\$0
Eastside Total Wastewater CIP	\$95,150,000
Water	
<u>Water Supply & Treatment System</u>	
<u>KBH Phase 1</u>	\$9,700,000
<u>Advanced Water Purification Facility</u>	\$32,670,000
Subtotal	\$42,370,000
<u>Water Distribution System</u>	
<u>Reservoirs</u>	
Montana East Reservoirs (2.5 + 2.0) - Vista Del Este/Homestead II	\$12,250,000
Eastside PSA Reservoirs (Ranchos Real - 2.0)	\$6,000,000
Subtotal	\$18,250,000
<u>Distribution Pumping Equipment</u>	
Montana East (3 MGD) - Ranchos Real	\$1,200,000
Subtotal	\$1,200,000
<u>Distribution Lines</u>	
Eastside Planned Service Area	\$18,000,000
Montana East Supply Lines	\$14,700,000
Montana East 36" Line	\$6,700,000
Subtotal	\$39,400,000
Eastside Total Water CIP	\$101,220,000



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WATER

Attachment D (continued)

Water and Wastewater Impact Fee

Proposed Capital Improvement and Cost

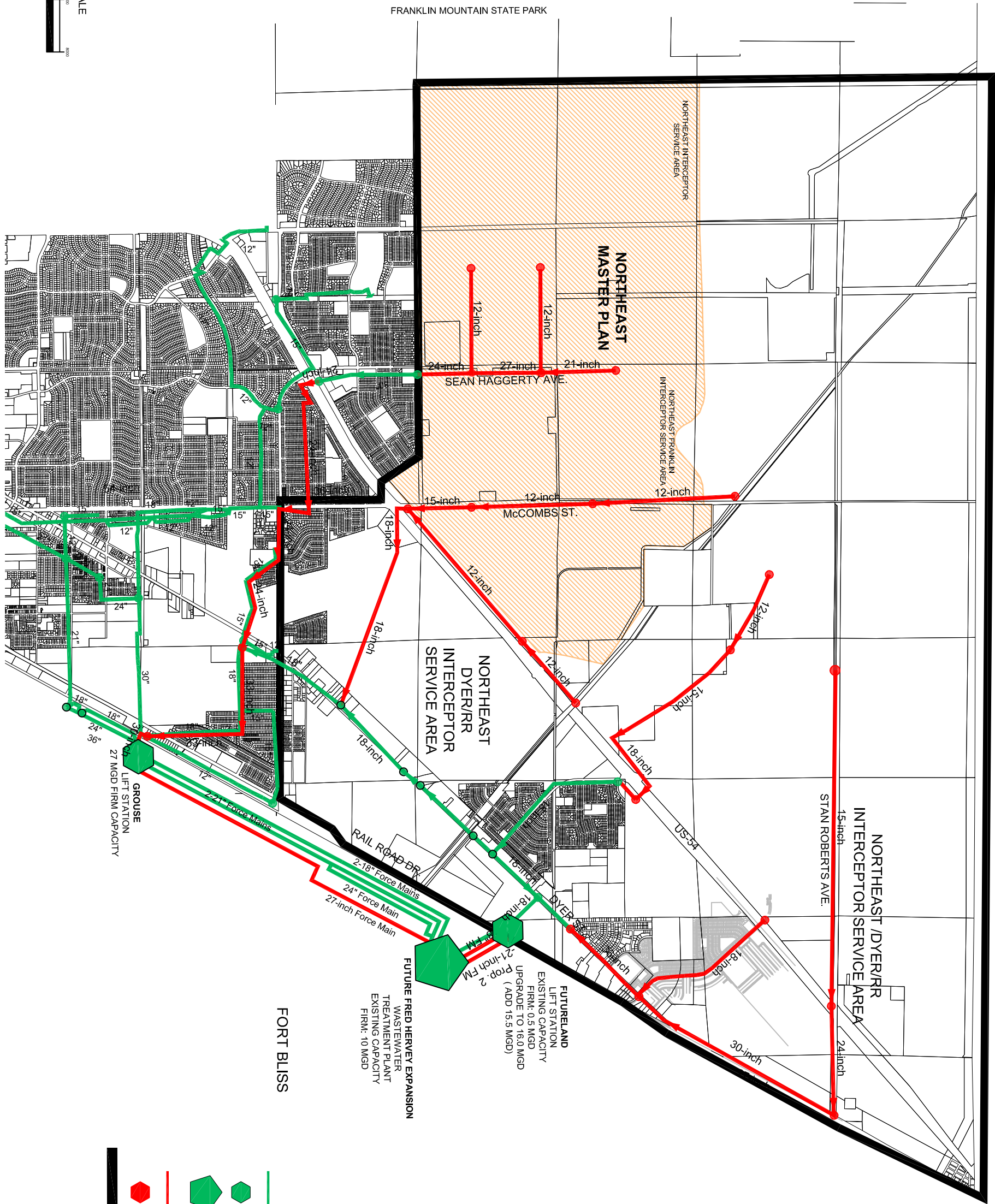
Eastside Service Area with land excluded (MUD 3 & 4)	Capital Cost
Wastewater	
<u>Wastewater Treatment</u>	
Bustamante WWTP Expansion 39 to 54 MGD	\$64,000,000
Subtotal	\$64,000,000
<u>Collection Systems</u>	
<u>Lines</u>	
Other Interceptors (Area 8 East)	\$10,400,000
Loop 375 East Interceptor System	\$17,150,000
	\$0
Subtotal	\$27,550,000
<u>Pumping & Force Mains</u>	
	\$0
Subtotal	\$0
Eastside Total Wastewater CIP	\$91,550,000
Water	
<u>Water Supply & Treatment System</u>	
<u>KBH Phase 1</u>	
	\$9,700,000
<u>Advanced Water Purification Facility</u>	
	\$32,670,000
Subtotal	\$42,370,000
<u>Water Distribution System</u>	
<u>Reservoirs</u>	
Montana East Reservoirs (2.5 + 2.0) - Vista Del Este/Homestead II	\$12,250,000
Eastside PSA Reservoirs (Ranchos Real - 2.0)	\$6,000,000
Subtotal	\$18,250,000
<u>Distribution Pumping Equipment</u>	
Montana East (3 MGD) - Ranchos Real	\$1,200,000
Subtotal	\$1,200,000
<u>Distribution Lines</u>	
Eastside Planned Service Area	\$18,000,000
Montana East Supply Lines (E&W, N&S)	\$14,700,000
Montana East Supply Line - 36"	\$6,700,000
Subtotal	\$39,400,000
Eastside Total Water CIP	\$101,220,000



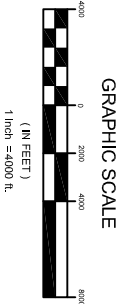
Attachment D (continued)
Water and Wastewater Impact Fee
Proposed Capital Improvement and Cost

Westside Service Area	Capital Cost
Wastewater	
<u>Wastewater Treatment</u>	\$0
Subtotal	\$0
<u>Collection Systems</u>	
<u>Lines</u>	
TransMountain NW Interceptors	\$1,680,000
La Mesa Line	\$400,000
Paseo Del Norte	\$1,635,000
Strahan Interceptor	\$1,500,000
Subtotal	\$5,215,000
<u>Pumping & Force Mains</u>	
TransMountain North LS & FM (.344 MGD - Development)	\$600,000
Upper Valley 3 LS (1.5+2.5+3.5 MGD)	\$7,100,000
Subtotal	\$7,700,000
Westside Total Wastewater CIP	\$12,915,000
Water	
<u>Water Supply & Treatment System</u>	\$0
Subtotal	\$0
<u>Water Distribution System</u>	
<u>Reservoirs</u>	
TransMountain NW #1A (4)	\$4,500,000
TransMountain NW #2A (3)	\$3,500,000
Artcraft #4 Tank (2)	\$3,800,000
Subtotal	\$11,800,000
<u>Distribution Pumping Equipment</u>	
Artcraft #1-NW-WFMP	\$450,000
TransMountain NW #1 Pump Station	\$2,000,000
Artcraft #3 Pump Station (3 MGD)	\$1,235,000
Subtotal	\$3,685,000
<u>Distribution Lines</u>	
Canut/UV Mn-NW PH IV (36")	\$5,000,000
TransMtn NW Supply to TransMtn #1	\$1,750,000
TransMtn NW Supply to TransMtn #2	\$3,500,000
Borderland 16"/24" Doniphan, Strahan, La Union	\$10,500,000
Artcraft #3 to #4	\$10,500,000
NW Water Distribution Mains	\$8,200,000
Subtotal	\$39,450,000
Westside Total Water CIP	\$54,935,000

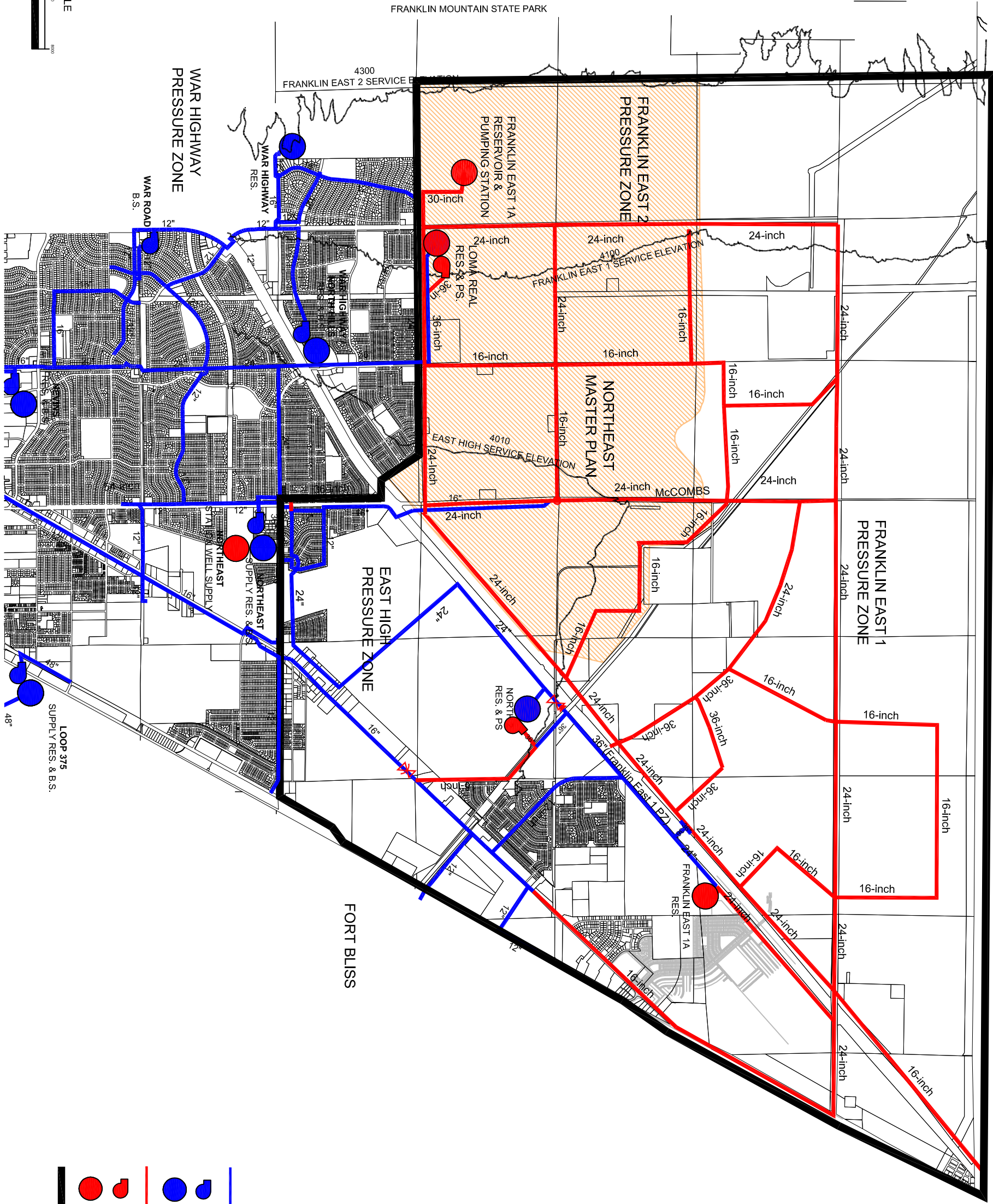
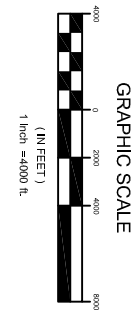
NORTHEAST SEWER IMPACT FEE SERVICE AREA MAP



- LEGEND:**
- EXISTING SEWER PIPELINES
 - EXISTING LIFT STATIONS
 - EXISTING TREATMENT PLANT
 - PROPOSED SEWER PIPELINES
 - PROPOSED LIFT STATIONS
 - NORTHEAST IMPACT FEE SERVICE AREA



NORTHEAST WATER IMPACT FEE SERVICE AREA MAP



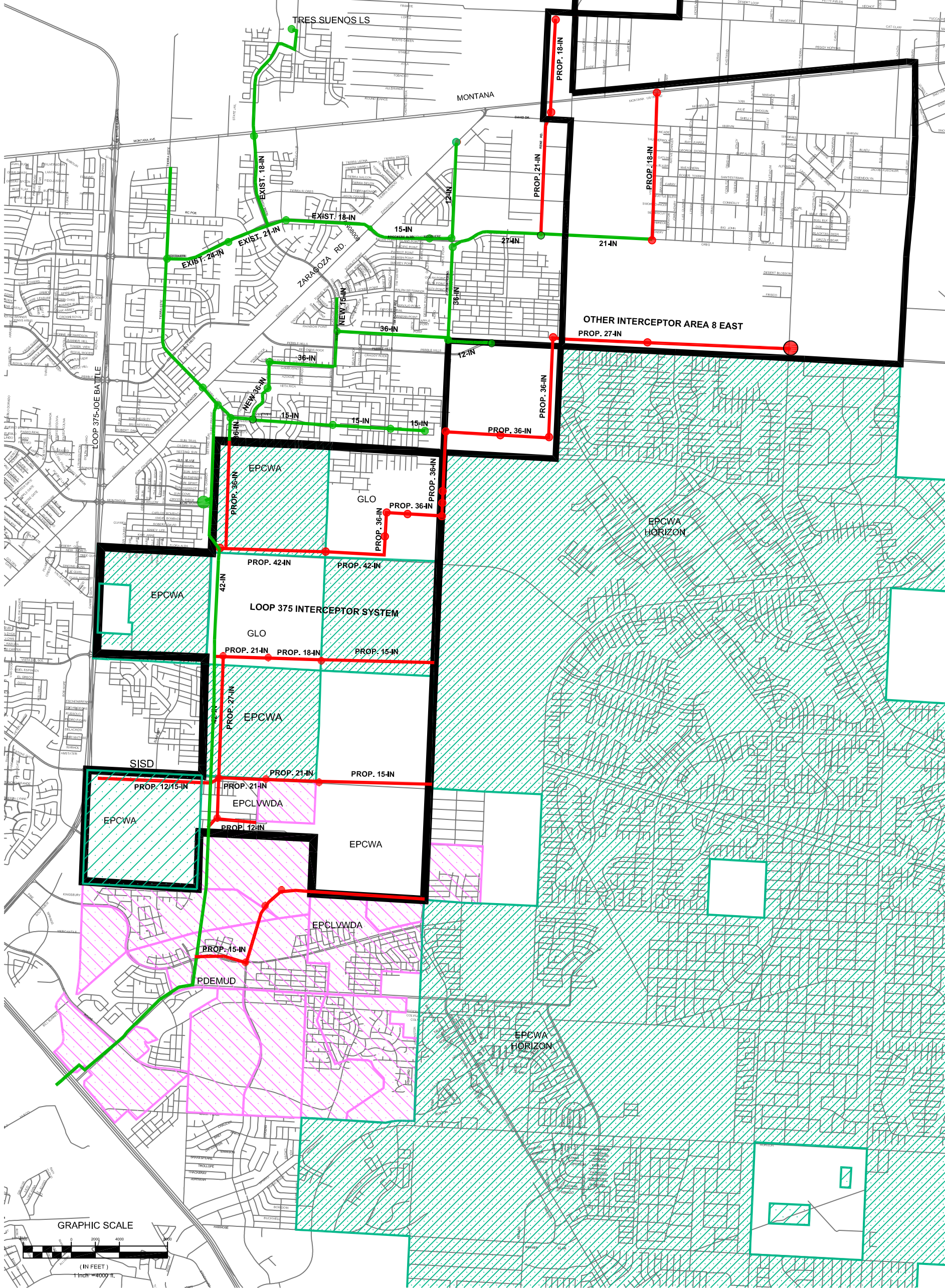
- LEGEND:**
- EXISTING WATER PIPELINES
 - EXISTING BOOSTER STATIONS
 - EXISTING RESERVOIRS
 - PROPOSED WATER PIPELINES
 - PROPOSED BOOSTER STATIONS
 - PROPOSED RESERVOIRS
 - NORTHEAST IMPACT FEE SERVICE AREA

EASTSIDE SEWER IMPACT FEE SERVICE AREA



LEGEND:

- EXISTING SEWER PIPELINES
- EXISTING LIFT STATIONS
- EXISTING TREATMENT PLANT
- PROPOSED SEWER PIPELINES
- PROPOSED LIFT STATIONS
- EASTSIDE IMPACT FEE SERVICE AREA

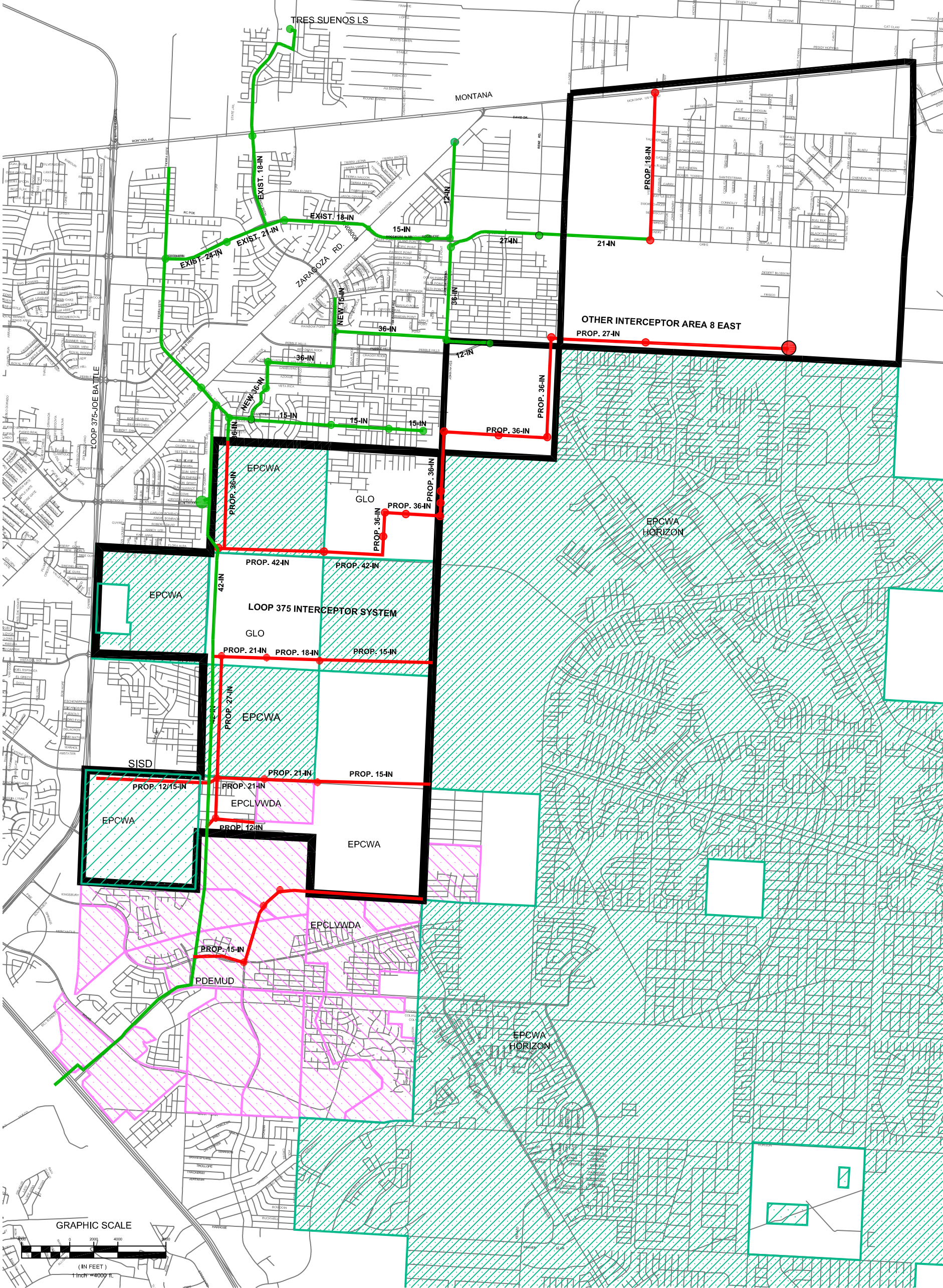


EASTSIDE SEWER IMPACT FEE SERVICE AREA



LEGEND:

- EXISTING SEWER PIPELINES
- EXISTING LIFT STATIONS
- EXISTING TREATMENT PLANT
- PROPOSED SEWER PIPELINES
- PROPOSED LIFT STATIONS
- EASTSIDE IMPACT FEE SERVICE AREA

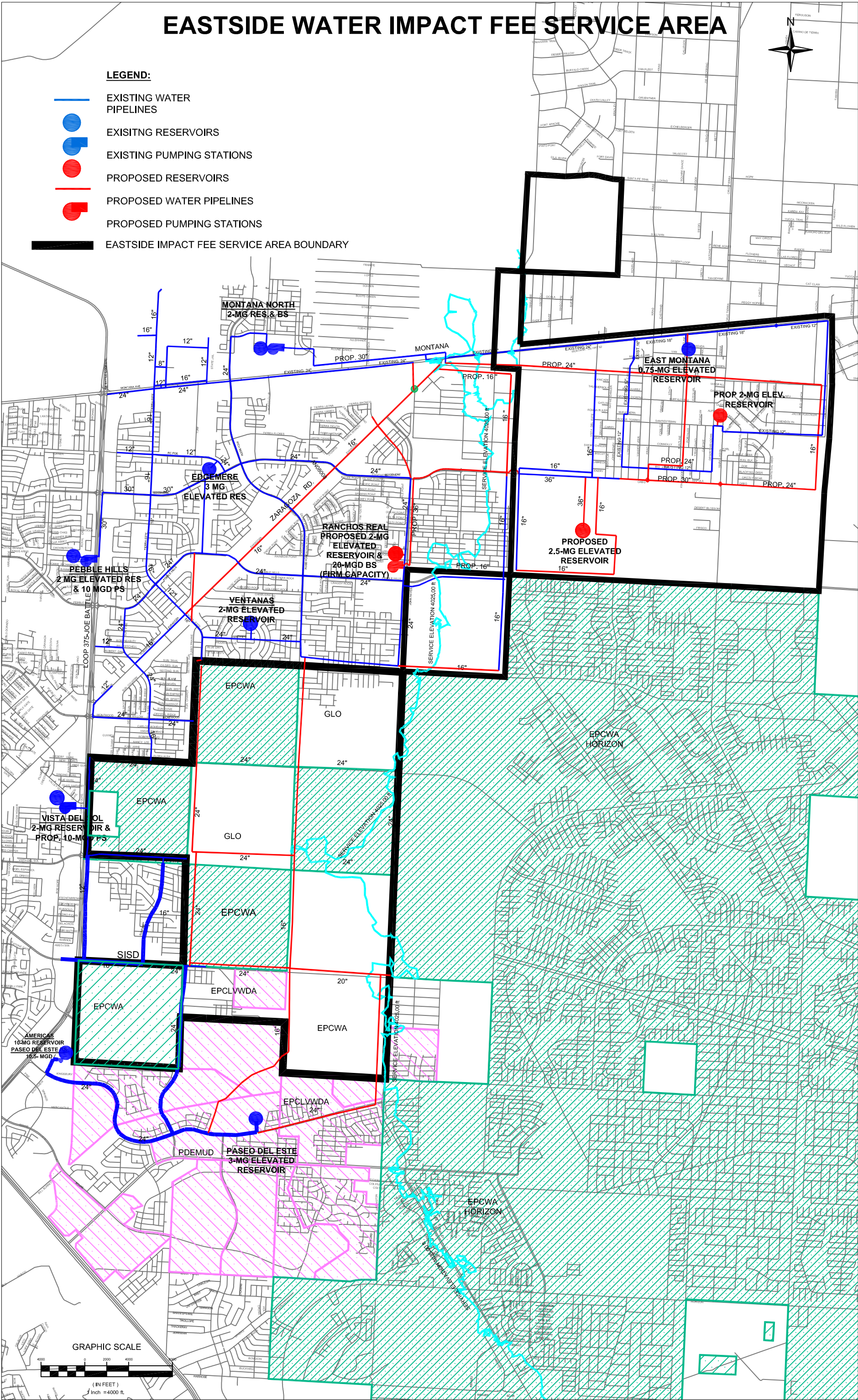


EASTSIDE WATER IMPACT FEE SERVICE AREA



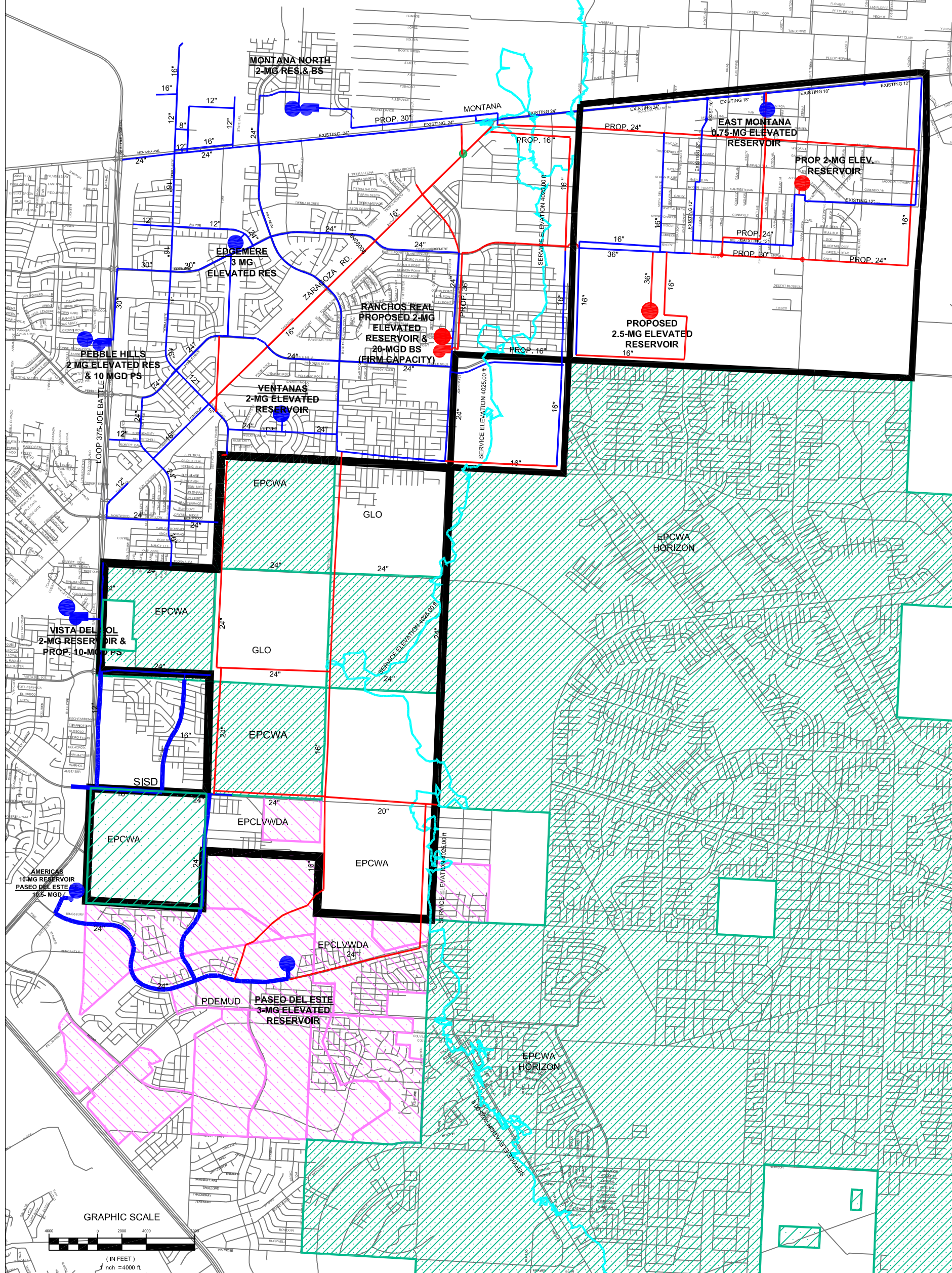
LEGEND:

- EXISTING WATER PIPELINES
- EXISTING RESERVOIRS
- EXISTING PUMPING STATIONS
- PROPOSED RESERVOIRS
- PROPOSED WATER PIPELINES
- PROPOSED PUMPING STATIONS
- EASTSIDE IMPACT FEE SERVICE AREA BOUNDARY



LEGEND:

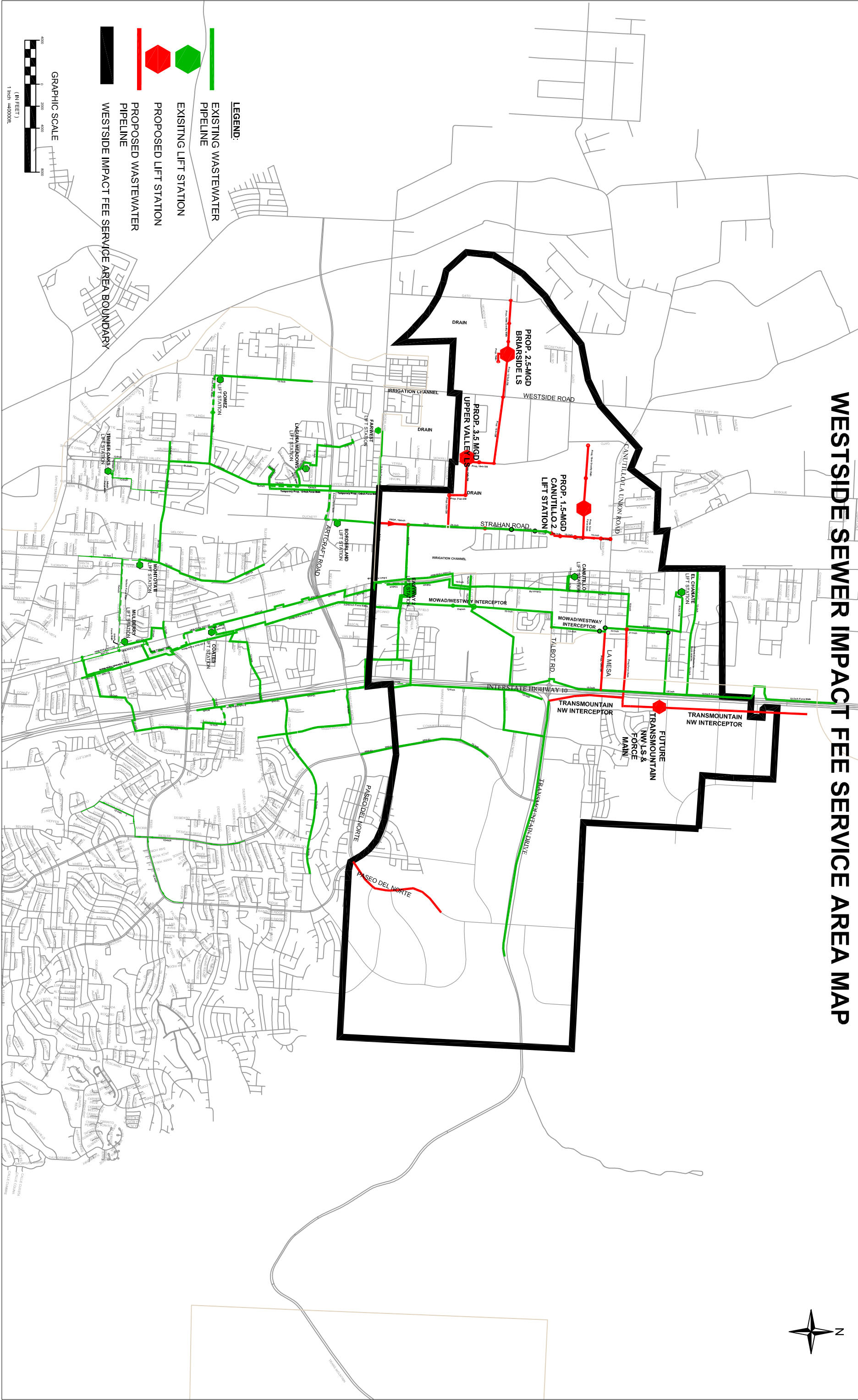
- EXISTING WATER
PIPELINES
- EXISTING RESERVOIRS
- EXISTING PUMPING STATIONS
- PROPOSED RESERVOIRS
- PROPOSED WATER PIPELINES
- PROPOSED PUMPING STATIONS
- EASTSIDE IMPACT FEE SERVICE AREA BOUNDARY



GRAPHIC SCALE

(IN FEET)
Inch = 4000

WESTSIDE SEWER IMPACT FEE SERVICE AREA MAP



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WESTSIDE IMPACT FEE SERVICE AREA BOUNDARY



GRAPHIC SCALE

(IN FEET)

1 inch = 4000 ft